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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HOWREY LLP C/O IP DOCKETING DEPARTMENT 2941 FAIRVIEW PARK DRIVE, SUITE 200 FALLS CHURCH, VA 22042-2924			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,196	WANG ET AL.	
	Examiner	Art Unit	
	Sow-Fun Hon	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 80-83,87-93,97-100,103-105,107-109 and 111-119 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 80-83,87-93,97-100,103-105,107-109 and 111-119 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/09/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Prosecution Reopened

1. Prosecution has been reopened due to Applicant's arguments regarding claims 80-83, in the remarks section dated 03/15/06. Finality is withdrawn. However, this Office action is made final as necessitated by Applicant's amendment of all independent claims 80, 77, 97, 105, 109, 113.

Response to Amendment

Withdrawn Rejections

2. The 35 U.S.C. 112, 2nd paragraph rejections of claims 106, 110, 109 have been withdrawn due to Applicant's amendment dated 03/15/06.
3. The 35 U.S.C. 103(a) rejections of claims 80-83,87-93,97-100,103-119 are withdrawn due to Applicant's amendment dated 03/15/06.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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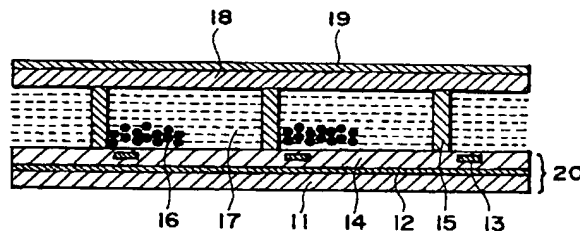
4. Claims 80,105,108 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakanishi (US 6,750,844).

Regarding claim 80, Nakanishi teaches an electrophoretic display which comprises display cells (sections, abstract) filled with a display fluid (dispersion liquid, abstract) and top-sealed with a top-sealing composition which is incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid, abstract). Nakanishi teaches that the top-sealing layer (expandable ceiling sheet 18, column 5, lines 34-35) is formed from a sealing composition comprising a high dielectric polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64).

Regarding claim 105, Nakanishi teaches a finished display or device (column 4, lines 12-15) in Fig. 2 shown on the next page, which comprises: (a) an array of display cells (display sections, column 4, lines 46-50) on an electrode layer (12, column 4, lines 15-20) wherein said display cells are filled with a display fluid (electrophoretic dispersion fluid, column 4, lines 46-50) and top-sealed with a top-sealing layer (ceiling sheet 18 (column 4, lines 46-50) formed from comprising a high dielectric polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric

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resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64), incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid, abstract); and (b) a protective coating on the filled and top-sealed display (ceiling sheet 18 is further coated with a protective film 19, column 4, lines 52-55).

**FIG. 2**

Regarding 108, Nakanishi teaches that the electrode layer comprises a patterned electrode (stripe-shaped 12, column 4, lines 15-20).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi as applied to claim 80 above, and further in view of Comiskey (US 6,327, 072).

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Nakanishi teaches an electrophoretic display which comprises display cells filled with a display fluid and top-sealed with a top-sealing layer formed from a sealing composition comprising a high dielectric polymer and a radiation curable composition, wherein said sealing composition is incompatible with the display fluid, as described above.

Nakanishi fails to teach that the top-sealing layer is between the display fluid and a substrate or electrode layer, between the display fluid and an adhesive or overcoat layer on a substrate or electrode layer, let alone that the adhesive is formed from a composition comprising a high dielectric polymer and a radiation curable composition.

However, Comiskey teaches an electrophoretic display which comprises display cells filled with a display fluid and top-sealed with a sealing layer (sealed with a top layer, column 3, lines 25-32, top layer 14 that seals the top of the microcells, column 10, lines 50-51). Comiskey teaches that the top-sealing layer 14 is between the display fluid (cells 10 and 23, column 10, lines 40-51) and a substrate 26 or an electrode layer 24 (column 10, lines 49-52). See Fig. 1 of Comiskey below.

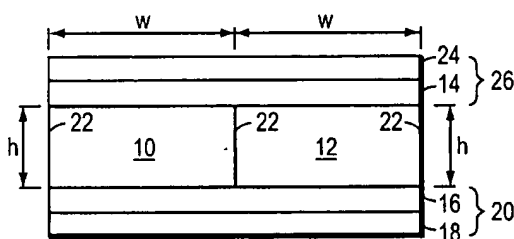


FIG. 1

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Comiskey teaches that the top substrate is overcoated with a polymer (column 13, lines 54-60). Thus the top-sealing layer 14 is between the display fluid (cells 10 and 12, column 10, lines 40-51) and an overcoat layer on substrate 26 or electrode layer 24 (column 10, lines 49-52). Comiskey teaches that the overcoat functions as an adhesive (fuses the top substrate to the microcell walls, column 13, lines 54-61), and is formed from a composition comprising a radiation curable composition (uncured polymer cured with heat or ultraviolet light. column 13, lines 56-60).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made, to have provided the top-sealing layer of Nakanishi between the display fluid and a substrate or electrode layer, between the display fluid and an adhesive or overcoat layer on a substrate or electrode layer, wherein the adhesive is formed from a composition comprising a high dielectric polymer and a radiation curable composition, in the display of Nakanishi, in order to provide a finished electrophoretic display, as taught by Comiskey.

6. Claim 107 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi as applied to claims 80,105,108 above, and further in view of Tahara (US 5,908, 899).

Nakanishi teaches the protective coating on the sealed microcup array, as described above, but fails to teach that it comprises a particulate filler.

However, Tahara teaches a sealing composition (abstract), which comprises polyurethane (urethane rubber, column 3, lines 35-45), which is a high dielectric polymer as defined by Applicant (original claim 5), and a radiation curable composition

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(curing with radiation, column 3, lines 65-68) comprises a particulate filler (powder, fiber, column 7, lines 35-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have added a particulate additive to the protective coating of Nakanishi, in order to provide the protective coating with the physical properties of the particulate filler, as taught by Tahara.

7. Claims 109,112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comiskey (US 6,327, 072) in view of Nakanishi (US 6,750,844).

Regarding claim 109, Comiskey teaches a finished electrophoretic display device which comprises: (a) an array of filled and top-sealed microcups (display cells, column 3, lines 24-32) on an electrode 18 or substrate layer 20 (column 10, lines 42-47), wherein said microcups are top-sealed with a top-sealing layer (sealed with a top layer, column 3, lines 25-32, top layer 14 that seals the top of the microcells, column 10, lines 50-51), (b) a second electrode layer electrode layer 24 on the top-sealed microcup array (column 10, lines 49-52), and (c) a protective coating on the second electrode layer 24 which is part of top substrate 26 (top substrate is coated with a polymer, column 13, lines 54-60, column 10, lines 49-52). See Fig.1 of Comiskey on a prior page.

Comiskey fails to teach that the electrode layer is disposed onto the top-sealed microcup array by lamination, coating, printing, vapor deposition, sputtering or a combination thereof. However, even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the

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product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See MPEP 2113 [R-1].

In addition, Comiskey fails to teach that the top-sealing composition comprises a high dielectric polymer or oligomer and a radiation curable composition, which is incompatible with the display fluid.

However, Nakanishi teaches an electrophoretic display which comprises display cells (sections, abstract) filled with a display fluid (dispersion liquid, abstract) and top-sealed with a top-sealing composition which is incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid, abstract). Nakanishi teaches that the top-sealing layer (expandable ceiling sheet 18, column 5, lines 34-35) is formed from a sealing composition comprising a high dielectric polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64), for the purpose of providing a top seal that is flexible and capable of expansion and contraction (column 5, lines 33-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a sealing composition comprising a high dielectric polymer or oligomer and a radiation curable composition, incompatible with

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the display fluid, to top-seal display cells filled with display fluid, in the electrophoretic display of Comiskey, in order to provide a top seal that is flexible and capable of expansion and contraction, as taught by Nakanishi.

Regarding claim 112, Comiskey teaches that the electrode layer comprises a patterned electrode (control grid electrode structure, column 2, lines 10-12).

8. Claim 111 is rejected under 35 U.S.C. 103(a) as being unpatentable over Comiskey in view of Nakanishi, as applied to claims 109,112 above, and further in view of Tahara (US 5,908, 899).

Comiskey in view of Nakanishi teaches the protective coating on the sealed microcup array, as discussed above, but fails to teach that it comprises a particulate filler.

However, Tahara teaches a sealing composition (abstract), which comprises polyurethane (urethane rubber, column 3, lines 35-45), which is a high dielectric polymer as defined by Applicant (original claim 5), and a radiation curable composition (curing with radiation, column 3, lines 65-68) comprises a particulate filler (powder, fiber, column 7, lines 35-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have added a particulate additive to the protective coating of Comiskey in view of Nakanishi, in order to provide the protective coating with the physical properties of the particulate filler, as taught by Tahara.

Regarding claim 87, 89, Comiskey teaches a semi-finished display panel (column 12, lines 15-16) which comprises: a) an array of filled display cells (column 3, lines 24-32) on an electrode 18 or substrate layer 20 (column 10, lines 42-47), which filled display cells are top-sealed with a top-sealing layer (sealed with a top layer, column 3, lines 25-32, top layer 14 that seals the top of the microcells, column 10, lines 50-51). See Fig.1 of Comiskey below.

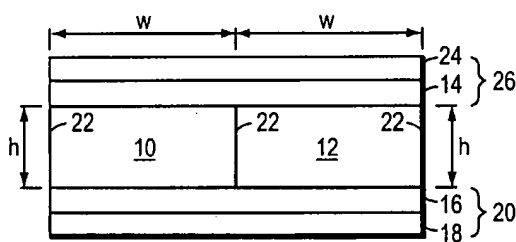


FIG. 1

Comiskey fails to teach that the sealing composition comprises a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid.

However, Nakanishi teaches an electrophoretic display which comprises display cells (sections, abstract) filled with a display fluid (dispersion liquid, abstract) and top-sealed with a top-sealing composition which is incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid,

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abstract). Nakanishi teaches that the top-sealing layer (expandable ceiling sheet 18, column 5, lines 34-35) is formed from a sealing composition comprising a high dielectric polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64), for the purpose of providing a top seal that is flexible and capable of expansion and contraction (column 5, lines 33-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a sealing composition comprising a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid, to top-seal display cells filled with display fluid, in the electrophoretic display of Comiskey, in order to provide a top seal that is flexible and capable of expansion and contraction, as taught by Nakanishi.

Comiskey in view of Nakanishi, fails to teach b) a temporary substrate laminated on top of the filled and top-sealed display cells, or that the temporary substrate is a releasable liner.

However, Yamazaki teaches that it is well known in the art to use temporary support substrates to support a display component during fabrication of the display component (kind of substrate supporting the stick crystal is different from the display substrate, column 2, lines 43-50), wherein the component is then peeled off and adhesively bonded to the display substrate (column 2, lines 45-50). Since the

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component can be peeled off the temporary support substrate (column 2, lines 45-49), the temporary support substrate functions as a releasable liner.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have laminated a temporary substrate in the form of a releasable liner, on top of the filled and top-sealed display cells of Comiskey in view of Nakanishi, in order to provide releasable temporary support to the filled and top-sealed display cells during fabrication of the display component, as taught by Yamazaki.

Regarding claim 88, Comiskey teaches that the display cells are microcells (column 10, lines 66-67), which are microcups (square in shape, column 11, line 1), or microgrooves (micro-ribbed, column 12, lines 36-38) or microchannels (narrow hollow tubes, column 12, lines 38-40).

Regarding claim 90, Comiskey fails to teach that the top-sealing composition comprises high dielectric polymers as defined by Applicant's specification (original claim 5) of polyurethanes, polycarbonates, polyamides, polyesters, and acrylic or methacrylic copolymers.

However, Nakanishi teaches that apart from butadiene rubber, which is a high dielectric polymer as defined by Applicant's specification (poly(butadiene), page 14), other high dielectric polymers as defined by Applicant's specification (original claim 5) of polyurethanes, polycarbonates, polyamides, polyesters, acrylic or methacrylic copolymers may be used (polyacrylates or polymethacrylates and copolymers of these, column 6, lines 33-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used other high dielectric polymers such as polyurethanes, polycarbonates, polyamides, polyesters, acrylic or methacrylic copolymers, in place of the poly(butadiene) in the top-sealing composition of the semi-finished display panel of Comiskey in view of Nakanishi and Yamazaki, in order to take advantage of the individual physical properties, as taught by Nakanishi.

Regarding claim 93, Comiskey fails to teach that the top-sealing composition further comprises a catalyst.

However, Nakanishi teaches that the top-sealing composition contains a catalyst (appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the top-sealing composition of Comiskey in view of Nakanishi and Yamazaki, with a catalyst for catalyzing the radiation cure of the radiation curable composition, as taught by Nakanishi.

Regarding claims 97, 100, Comiskey teaches a semi-finished display panel (column 12, lines 15-16) which comprises: a) an array of filled display cells (column 3, lines 24-32) on an electrode 18 or substrate layer 20 (column 10, lines 42-47), which filled display cells are top-sealed with a top-sealing layer (sealed with a top layer, column 3, lines 25-32, top layer 14 that seals the top of the microcells, column 10, lines 50-51). See Fig.1 of Comiskey on a prior page.

Comiskey fails to teach that the top-sealing composition comprises a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid.

However, Nakanishi teaches an electrophoretic display which comprises display cells (sections, abstract) filled with a display fluid (dispersion liquid, abstract) and top-sealed with a top-sealing composition which is incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid, abstract). Nakanishi teaches that the top-sealing layer (expandable ceiling sheet 18, column 5, lines 34-35) is formed from a sealing composition comprising a high dielectric polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64), for the purpose of providing a top seal that is flexible and capable of expansion and contraction (column 5, lines 33-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a sealing composition comprising a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid, to top-seal display cells filled with display fluid, in the electrophoretic display of Comiskey, in order to provide a top seal that is flexible and capable of expansion and contraction, as taught by Nakanishi.

Comiskey in view of Nakanishi, fails to teach that the array of filled and top-sealed display cells is between two temporary substrate layers.

However, Yamazaki teaches that it is well known in the art to use temporary support substrates to support a display component during fabrication of the display component (kind of substrate supporting the stick crystal is different from the display substrate, column 2, lines 43-50), wherein the component is then peeled off and adhesively bonded to the display substrate (column 2, lines 45-50). Since the component can be peeled off the temporary support substrate (column 2, lines 45-49), the temporary support substrate functions as a releasable liner.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have placed the array of filled and top-sealed display cells of Comiskey in view Nakanishi, between two temporary substrate layers, in the form of releasable liners, in order to provide top and bottom releasable temporary support to the filled and top-sealed display cells during fabrication of the display component, as taught by Yamazaki.

Regarding claim 98, Comiskey teaches that the display cells are microcells (column 10, lines 66-67), which are microcups (square in shape, column 11, line 1), or microgrooves (micro-ribbed, column 12, lines 36-38) or microchannels (narrow hollow tubes, column 12, lines 38-40).

Regarding claim 99, Comiskey teaches that the microcups are prepared by embossing (microprinting, column 12, line 9), molding (squeezed together in a mold and fused, column 14, lines 7-10), and lithography (column 12, lines 9-14).

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Regarding claims 113, 115, Comiskey teaches a semi-finished display panel (column 12, lines 15-16) which comprises: a) an array of filled display cells (column 3, lines 24-32), which filled display cells are top-sealed with a sealing layer (sealed with a top layer, column 3, lines 25-32, top layer 14 that seals the top of the microcells, column 10, lines 50-51); and b) an electrode 24 or a substrate layer 26 laminated on top of the filled and top-sealed display cells (column 10, lines 49-52). See Fig.1 of Comiskey below.

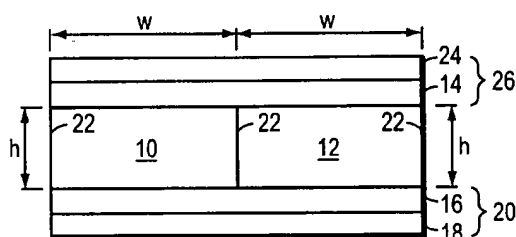


FIG. 1

Comiskey fails to teach that the sealing composition comprises a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid.

However, Nakanishi teaches an electrophoretic display which comprises display cells (sections, abstract) filled with a display fluid (dispersion liquid, abstract) and top-sealed with a top-sealing composition which is incompatible with the display fluid (ceiling sheet is formed by applying a hardenable precursor liquid, which is immiscible with the dispersion liquid, over the partitioning walls containing the dispersion liquid, abstract). Nakanishi teaches that the top-sealing layer (expandable ceiling sheet 18, column 5, lines 34-35) is formed from a sealing composition comprising a high dielectric

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polymer (homopolymer of butadiene, column 5, line 41) as defined by Applicant's specification (poly(butadiene), page 14) and a radiation curable composition (mixing elastomeric resin or precursor thereof with a polymerizable monomer and an appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64), for the purpose of providing a top seal that is flexible and capable of expansion and contraction (column 5, lines 33-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a sealing composition comprising a high dielectric polymer or oligomer and a radiation curable composition, incompatible with the display fluid, to top-seal display cells filled with display fluid, in the electrophoretic display of Comiskey, in order to provide a top seal that is flexible and capable of expansion and contraction, as taught by Nakanishi.

Comiskey in view of Nakanishi, fails to teach that the array a) of filled display cells are on a temporary substrate.

However, Yamazaki teaches that it is well known in the art to use temporary support substrates to support a display component during fabrication of the display component (kind of substrate supporting the stick crystal is different from the display substrate, column 2, lines 43-50), wherein the component is then peeled off and adhesively bonded to the display substrate (column 2, lines 45-50). Since the component can be peeled off the temporary support substrate (column 2, lines 45-49), the temporary support substrate functions as a releasable liner.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have fabricated the filled and top-sealed display cells of Comiskey in view of Nakanishi, on a temporary support, in the form of a releasable temporary liner, in order to provide the releasable temporary support required by the filled and top-sealed display cells during fabrication of the display component, as taught by Yamazaki.

Regarding claim 114, Comiskey teaches that the display cells are microcells (column 10, lines 66-67), which are microcups (square in shape, column 11, line 1), or microgrooves (micro-ribbed, column 12, lines 36-38) or microchannels (narrow hollow tubes, column 12, lines 38-40).

Regarding claim 116, Comiskey fails to teach that the top-sealing composition comprises high dielectric polymers as defined by Applicant's specification (original claim 5) of polyurethanes, polycarbonates, polyamides, polyesters, and acrylic or methacrylic copolymers.

However, Nakanishi teaches that apart from butadiene rubber, which is a high dielectric polymer as defined by Applicant's specification (poly(butadiene), page 14), other high dielectric polymers as defined by Applicant's specification (original claim 5) of polyurethanes, polycarbonates, polyamides, polyesters, acrylic or methacrylic copolymers may be used (polyacrylates or polymethacrylates and copolymers of these, column 6, lines 33-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used other high dielectric polymers such as

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polyurethanes, polycarbonates, polyamides, polyesters, acrylic or methacrylic copolymers, in place of the poly(butadiene) in the top-sealing composition of the semi-finished display panel of Comiskey in view of Nakanishi and Yamazaki, in order to take advantage of the individual physical properties, as taught by Nakanishi.

Regarding claim 119, Comiskey fails to teach that the top-sealing composition further comprises a catalyst.

However, Nakanishi teaches that the top-sealing composition contains a catalyst (appropriate photoinitiator, followed by hardening due to photoirradiation, column 5, lines 59-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the top-sealing composition of Comiskey in view of Nakanishi and Yamazaki, with a catalyst for catalyzing the radiation cure of the radiation curable composition, as taught by Nakanishi.

10. Claims 103-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comiskey in view of Nakanishi and Yamazaki, as applied to claims 87-90, 93, 97-100, 113-116, 119 above, and further in view of Verlinden (US 6,092,392).

Comiskey in view of Nakanishi and Yamazaki, has been discussed above, and fails to teach that the semi-finished display panel is in the form of a roll.

However, Verlinden teaches that components of display panels (column 4, lines 35-45) are put in the form of a roll during continuous fabrication and storage (column 4, lines 45-55), which is suitable for implementation on an industrial scale (column 1, lines 65-66).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have put the semi-finished display panel of Comiskey in view of Nakanishi and Yamazaki, in the form of a roll, in order to implement continuous fabrication and storage on an industrial scale, as taught by Verlinden.

11. Claims 91-92, 117-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comiskey in view of Nakanishi and Yamazaki as applied to claims 87-90, 93, 97-100, 113-116, 119 above, and further in view of Tahara (US 5,908, 899).

Regarding claims 91,117, Comiskey in view of Nakanishi and Yamazaki teaches the radiation curable composition as discussed above, but fails to teach that it further comprises a multifunctional monomer.

However, Tahara teaches a sealing composition (abstract), which comprises a radiation curable composition (curing with radiation, column 3, lines 65-68), which further comprises a multifunctional monomer (column 5, lines 1-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the radiation curable composition in the sealing composition of the semi-finished display panel of Comiskey in view of Nakanishi and Yamazaki, with a multifunctional monomer component, in order to take advantage of its multifunctional reactive properties, as taught by Tahara.

Regarding claims 92,118, Comiskey in view of Nakanishi and Yamazaki teaches the top-sealing composition as described above, but fails to teach that it further comprises a crosslinking agent.

However, Tahara teaches that the sealing composition comprises a crosslinking agent (coupling agent, column 7, lines 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the sealing composition of Comiskey in view of Nakanishi and Yamazaki, with a crosslinking agent, in order to obtain a crosslinked top-sealing layer with the properties provided by the crosslinks, as taught by Tahara.

Response to Arguments

12. Applicant's arguments are directed to the new limitation in the amended claims, and are hence moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

03/31/06

[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

4/3/06